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DIRECTORATE OF
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Intelligence Memorandum

Economic Prospects In Thailand

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CENTRAL INTELLIGENCE AGENCY
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INTELLIGENCE MEMORANDUM

Economic Prospects In Thailand

Introduction

Thailand achieved rapid economic growth in the 1960s, essentially without inflation. The ability to continue this impressive performance, however, is threatened by a slowdown in foreign exchange earnings resulting from poor export markets and expected reductions in US expenditures related to the Vietnam conflict. Foreign exchange problems began to appear in 1969 and 1970 and are expected to continue. This memorandum assesses the actual impact of these problems in 1969 and 1970 and the likely effects in the next few years.

Discussion

Background

1. Thailand's economy grew at an impressive rate throughout the 1960s as a result of rapidly rising demand, first led by exports, and since 1965, by US military expenditures associated with the Vietnam conflict. A stable political climate coupled with liberal economic policies encouraged private investment and enabled production to respond to rising demand. During the period 1960-68, gross domestic product (measured in constant 1962 prices) grew at an average annual rate of about 8%, one of the highest sustained rates in less developed Asia. Private savings increased rapidly. Export earnings and capital inflows from abroad exceeded import growth and enabled Thailand to nearly triple its holdings of foreign exchange reserves -- from $353 million at the end of 1960 to $922 million at the end of 1968.

Note: This memorandum was prepared by the Office of Economic Research and coordinated within CIA.

2. Exports played a key role in stimulating rapid economic growth. Thailand's merchandise exports grew at an average annual rate of 9% between 1961 and 1966. Since 1967, commodity export growth has slowed sharply to an average of 1% annually, and receipts from services have become the most dynamic source of foreign exchange. These receipts more than quadrupled between 1965 and 1969, largely reflecting US expenditures associated with the Vietnam buildup.

3. Rapid growth of private investment at about 10% a year on the average in the early 1960s and 18% during 1964-67 was itself partly a response to the export boom in commodities and services but in recent years has acquired a momentum of its own, based on the economy's sustained growth and stability. In turn, large investments greatly raised production in the modern urban sector, including trade, services, and manufacturing. The government followed policies favoring private initiative and directed its expenditures almost exclusively toward improving the country's infrastructure and security. Government investment was only about 30% as large as private investment. Government budget deficits were modest, and a large part of government investment was financed out of current budget surpluses.

4. With exports of goods and services and private investment booming, the government was able to follow consistently conservative fiscal and monetary policies without dampening economic growth. Its reward was a high degree of monetary and price stability. The money supply increased less than GDP in all but three years of the 1960-69 period. And, during 1960-69 the wholesale and consumer price indexes rose only 17% -- an average of only 2% a year, less than the average for industrial countries.

5. Although monetary stability in Thailand is basically the result of government policies, it has had powerful effects on private economic behavior. It has encouraged a high rate of private savings and the holding of private financial savings in relatively illiquid forms, such as time deposits rather than currency. Private savings

increased 13.4% a year, from 14% of GDP in 1960 to 17% in 1968. The public's holdings of all forms of financial assets grew more than two-fold since 1960 while income doubled. Currency, however, declined in relative importance from one-half of total financial assets in 1960 to about one-quarter in 1969, while holdings of time deposits and savings bonds more than doubled to about one-half of the total. Government policies have encouraged these financial trends not only by promoting price stability but also by providing tax incentives to individuals and firms to hold their savings in the form of savings deposits or premium bonds by allowing tax exemptions on interest on such accounts. This pattern of private financial behavior is unusual in developing countries. It reflects a high degree of confidence in the stability of the currency.

Economic Developments in 1969 and 1970*

6. Rapid economic growth continued in 1969 and 1970, but a disappointing export performance, combined with reductions in US military expenditures (both official transfers and Vietnam-related spending), caused sharp drawdowns in foreign exchange reserves. At the same time, rising Thai military expenditures brought about increased use of deficit financing of government budgets. Merchandise exports have grown only slightly since 1967 because of generally deteriorating world market forces for several principal export commodities, particularly rice. Whereas prior to 1969, export stagnation was more than offset by the tremendous rise in receipts from services, earnings from this source declined about 10% in 1969 and further in 1970 by an estimated 6% as a consequence of declines in US military spending. Official economic aid also has declined at an average rate of about 15% since 1968, the peak year.

Economic Growth

7. These problems did not prevent continued rapid economic growth in 1969 and 1970, partly because of exceptionally good harvests. According to preliminary data, GDP, measured in constant prices, rose slightly more than 10% to a level of $5.5 billion in 1969. In 1970 the Thai economy probably grew at a lower rate than in 1969 but still close to the average 8% recorded throughout the 1960s.

* *See Tables 1-6.*

8. Overall economic growth was particularly high in 1969 because agricultural production grew nearly 10% (compared with an average annual rate of growth of about 5% during 1960-68). Paddy output continued to recover from the severe setback of 1967 and rose 8% to a level of 13.4 million tons. Production of most other commodities was at record levels due to favorable weather and, in some cases, to strong foreign market demand. Preliminary reporting indicates that the increase in agricultural output in 1970 was probably also above the 5% long-term average, although smaller than in 1969. Large rice stocks left over from the 1969 harvest and falling domestic prices were instrumental in keeping paddy output at the 1969 level. Most other crops fared better and were led by increases in corn and tapioca which benefited from strong demand in foreign markets.

9. The pace of investment has slowed. In 1969 the growth of public investment was cut to only 4% in order to increase military spending. Private investment, however, continued to be highly dynamic, rising by 15%. A further slowdown was expected in 1970 with public investment planned to grow only about 3% and private investment growing by an estimated 10%. Excess capacity developed in several industries and service sectors partly because of declining US military expenditures.

Declining Foreign Exchange Reserves

10. Continuing deterioration of the balance of payments caused Thailand's first foreign exchange drawdown in a decade in 1969 and the drawdown was accelerated in 1970. Holdings of foreign exchange reserves fell $48 million in 1969 and $115 million through the first 11 months of 1970, a total drop of about 18%. International reserves amounted to $759 million at the end of November 1970, equal to about 7½ months' imports at the 1970 rate.*

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* *Thailand's foreign exchange reserve position is reported as net of commercial bank liabilities. Gross foreign exchange reserves reported in the IMF's International Financial Statistics bulletin amounted to $985 million at the end of 1969 and $903 million through November 1970, reflecting drawdowns of $36 million and $82 million, respectively, in the two years.*

11. The prime factor in the balance-of-payments deterioration during 1969 was an increase of 7% in the trade deficit -- in spite of an 8% rise in exports -- as imports expanded in line with the rapid growth of GDP. This, combined with a $25 million decline in service receipts from US military spending associated with the Vietnam conflict, caused a record $275 million deficit on current account. Net capital inflows and official transfers remained at about the same level as in 1968, as increases in receipts were largely offset by a sharp rise in payments for debt service and purchases of participating equity shares in the World Bank, and were insufficient to cover the rise in the current account deficit.

12. During the first nine months of 1970, Thailand's balance of payments recorded a larger deficit than in the corresponding period of 1969 mainly because of an increased trade deficit and declining service receipts and transfer payments. The current account deficit grew slightly to $233 million. The overall deficit amounted to $78 million, compared with a $27 million deficit recorded in the comparable period of 1969. Exports stagnated and service receipts were somewhat lower than in 1969. Import growth slowed considerably, however, amounting to only 1% through September.

13. Slow growth of exports has been the major economic problem in the last few years. During 1960-64, exports grew at an average rate of 11%, as rice sales were particularly strong -- rising 70% in value. Rubber and tin prices were favorable. In contrast, the period 1965-68 saw an average annual export growth of only about 4%. Rice prices soared in 1967 and 1968, but the volume of rice sales fell by about one-third, as some of Thailand's major rice markets -- Japan, Ceylon, and the Philippines -- reduced or eliminated their rice deficits. In 1969, rice prices fell sharply while the volume of sales leveled off, but higher prices for rubber, tin, corn, and kenaf were largely responsible for an 8% rise in total export earnings.

14. Through the first nine months of 1970, exports increased only 2%, and preliminary indications are that there was no export growth for the full year. Export prices for rice dropped 17% while volume was marginally ahead of 1969. Prices of several other commodities, particularly rubber, were also somewhat lower than in 1969.

15. The sharp slowdown in import growth in 1970 in spite of apparently continued rapid growth of GDP is attributable partly to increased import duties (averaging about 6% of import duty collections) in July, on a broad spectrum of consumer goods, and to cuts in investment -- particularly public sector investment. Through the first half of the year, imports rose 6% compared with 9% growth in the comparable period of 1969. In the third quarter, imports declined 7% compared with a rise of 9% in the same period of 1969. This sharp drop, however, probably reflects the influence of temporary developments and is unlikely to continue even with the higher tariffs and stagnant government investment.

Fiscal Developments

16. The Thai government in recent years has begun to contend with substantial budget deficits. The deficit had already gone from less than 2 billion baht ($88 million, 13% of expenditures) in 1966 to nearly 5 billion baht ($238 million, 23% of expenditures) in 1968. There was no change in 1969, but in fiscal year (FY) 1970* another increase -- to more than 6 billion baht ($306 million) -- occurred.

17. Growing deficits are due to rising military expenditures coupled with a slowdown in the growth of revenues. Military spending has risen at rates of 15%-20% annually since 1966, largely as a result of rising requirements for expenditures from insurgency suppression and maintenance and reequipment of forces. Total government spending was held down by holding capital expenditures near the 1968 level, as shown in the following tabulation for FY 1966-70*. Declines in export duty collections, mainly on rice, have been a significant factor in the slower growth of total revenue since 1968. In calendar years 1969 and 1970, revenues grew by only 10% and 8%, respectively, compared with an average annual rate of 14% during 1964-68, as receipts from the rice premium were cut in half.

* *The Thai fiscal year runs from 1 October through 30 September.*

	Million US $				
	1966	1967	1968	1969	1970 (est)
Government revenue	612.5	704.8	782.6	874.0	913.5
Government expenditure a/	652.9	805.3	958.3	1,047.1	1,127.9
Current	476.0	586.5	668.4	750.5	828.8
Capital	177.0	218.8	289.9	296.6	299.0
Transfers to local governments, state enterprises, and IFCT	47.1	52.9	62.7	65.4	91.3
Budget deficit	*87.4*	*153.2*	*238.3*	*238.5*	*305.8*
Percent of total expenditure	*12.5*	*17.9*	*23.4*	*21.4*	*25.1*

a. Becausing of rounding, components may not add to the totals shown.

18. As shown in the following tabulation for FY 1966-70, the government has relied increasingly on the central bank to finance budget deficits as inflows of foreign assistance have not increased and bond sales have declined.

	Million US $				
	1966	1967	1968	1969	1970 (est)
Foreign assistance a/	45.8	58.4	74.2	71.5	63.2
Loans (net)	3.0	9.5	12.9	1.3	10.3
Grants	42.8	48.8	61.3	70.2	52.9
Domestic receipts					
Savings bank and bond sales	46.5	51.4	37.7	24.5	36.7
Miscellaneous	16.3	34.8	37.5	35.1	34.9
Bank of Thailand and Commercial Banks (net)	-21.0	8.6	88.9	107.5	171.0
Total funding	*87.4*	*153.2*	*238.3*	*238.5*	*305.8*

a. Because of rounding, components may not add to the totals shown.

Money Supply and Prices

19. Despite falling foreign exchange reserves and rising budget deficits, confidence in the economy and currency was undisturbed. Deficit financing of government expenditures was partly offset by foreign exchange drawdowns, and a continued high rate of private saving deposits balanced most of the continued rapid increase of bank credit to the private sector (16% in 1969, the same as during 1960-68.)

20. Private savings have kept pace with economic growth, rising to 20% of GDP in 1969, and 80% of the rise in financial assets was in the form of private savings deposits, compared with an average of 65% during 1960-68. During the first nine months of 1970, increases in private savings deposits took up nearly the entire increase in financial assets. As a result, money supply, which grew by about 5% in 1969, rose less than 1% in January-September 1970.

21. The slow growth of money supply and surpluses in agricultural production -- reflecting good harvests and difficulties in foreign markets -- and, to a lesser degree, excess capacity in industry have resulted in price stability. The consumer price index rose less than three percent in 1969 and remained stable in 1970. Wholesale prices fell slightly on a yearly basis but fluctuated during the year, reflecting seasonal agricultural factors.

Prospects Over the Next Few Years

General

22. The outlook for the next few years is for a further slowdown in overall economic growth because of the influence of a slow growth of commodity exports and declines in service receipts and foreign assistance. US military expenditures are projected to decline to a level of $115 million by 1973, about half the peak 1968 level, because of the winding down of construction and maintenance activities at US bases in Thailand. We project private foreign investment to increase about $25 million annually. Unless Thai government policies become markedly less favorable to the foreign investors, private foreign investment is likely to continue rising even if overall economic growth slows markedly.

23. Current programs indicate little change in the overall level of foreign economic assistance in the next two years. About half of the total ($20 million) could be in the form of US P.L.-480 credits. No substantial change in this program is currently projected. The remainder -- mainly project aid -- comes predominantly from international agencies and the United States. Aid for projects that could be implemented in the next two years by and large has already been committed.

Merchandise Exports

24. The short-term prospect for merchandise exports is for an average annual growth of 4%-6%, an improvement over that achieved in 1970 but well below that of earlier years. Although the world market for rice will probably remain soft, additional substantial declines in prices are not likely, and Thailand has already adjusted to the loss of several major markets for rice. Rice exports are projected to rise 4%-5% annually. Earnings from rubber, on the other hand, could drop in spite of increased sales of close to 5% because of offsetting price declines. Exports of corn and tapioca will probably grow at lower rates than in the past (averaging 3%-5% annually) because of processing problems with tapioca and inadequate storage and distribution limitations for corn. International Tin Council quotas should limit tin exports to about 4% growth annually. The outlook for shrimp, tobacco, and a number of other newer export commodities is considerably more favorable (annual growth rates of 6%-12% for individual items are indicated), but these products as a group contribute only about 20% to total export earnings.

25. Despite the pressing need for larger and more diversified export earnings, Bangkok's major efforts are still aimed predominantly at promoting increased sales of existing products. A strong rice promotion effort was launched in 1970, and through the first half of the year rice exports were running more than 20% better than in 1969. Price declines, however, largely negated the increased volume, with the result that earnings from rice were less than 2% above the previous year's level. Moreover, volume also fell in the second half, so that the volume of sales for the full year was about at the 1969 level.

26. Export-oriented manufacturing based on locally provided raw materials has a large potential in Thailand, particularly in such areas as seafood processing, fruit canning, and the like. Also Thailand could use its cheap labor to process imported industrial raw materials for export as Taiwan and Korea have been doing. To date, however, only one industrial estate is being developed, and neither the government, through the use of tax and other incentives, nor the Board of Investment has been active in export industry promotion. It is unlikely, in any event, that industrial exports could be developed quickly enough to make a significant contribution to earnings in the next two or three years.

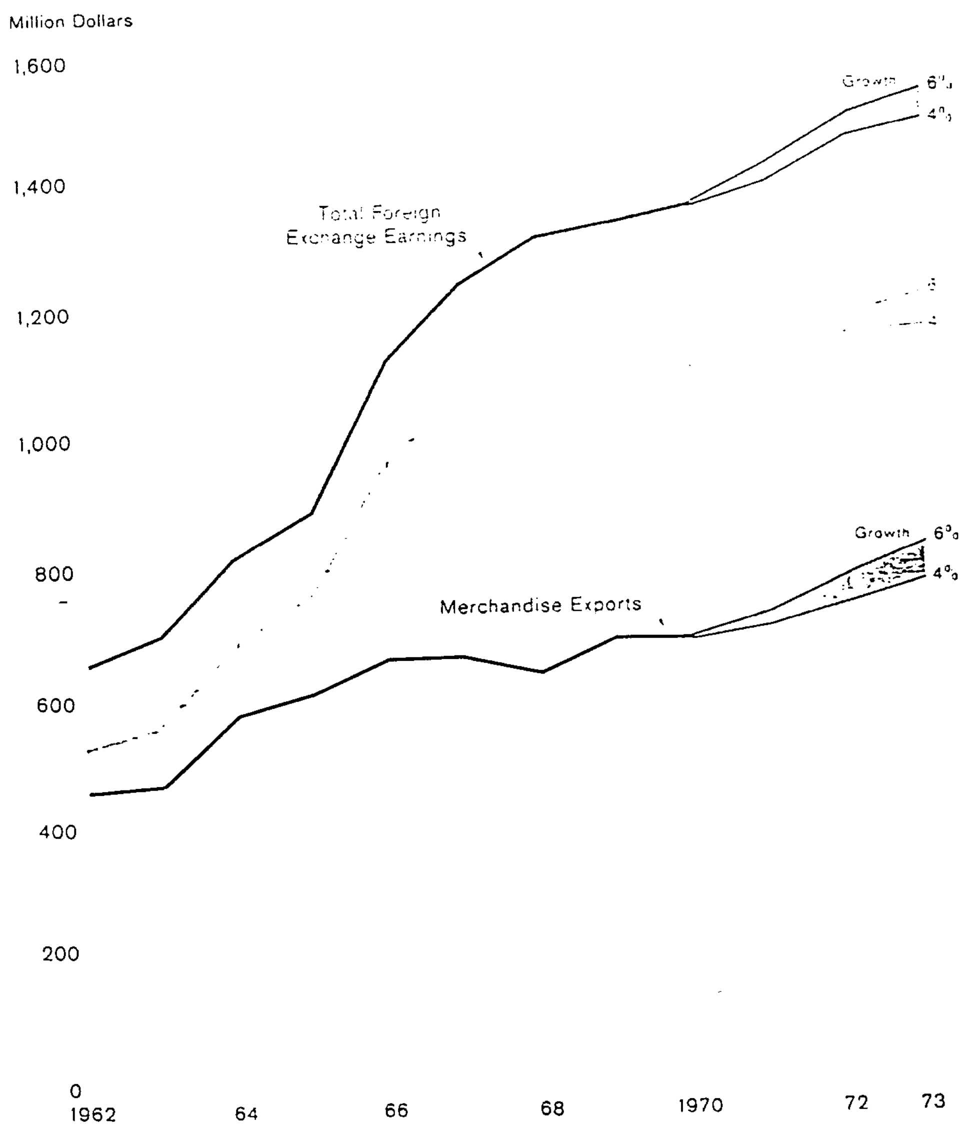
Import Capacity and Requirements

27. With merchandise exports growing only 4%-6% a year and US military expenditures and official aid declining, total foreign exchange earnings probably will increase only 3%-4% a year, even if private foreign investment grows substantially, as shown in the tabulation and Figure 1 below:

	Million US $			
	1970	1971	1972	1973
Merchandise exports				
At 4% growth	686	701	745	777
At 6% growth	686	726	784	832
US military expenditures	188	163	140	115
Other services	232	257	275	275
Official aid	50	48	46	44
Private foreign investment	202	226	250	274
Total foreign exchange earnings (i.e. import capacity)				
At 4% growth	1,358	1,395	1,456	1,485
At 6% growth	1,358	1,420	1,495	1,540

Figure 1

THAILAND: Import Capacity



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28. This means that import growth above 3%-4% a year would require reductions in reserves. On the other hand, a 3%-4% growth rate of import of goods and services probably would support about the same growth of GDP, or not much more than one-third the recent rate.

Government Internal Policies

29. The extent of the economic slowdown and of the resulting drop in foreign exchange reserves will be influenced by government fiscal and monetary policies. In the past, private credit has been allowed to expand sufficiently to fuel growing production in the private sector -- interest rates have been raised at times, but credit has not been rationed. Fiscal policies, however, have been conservative and will probably remain so even though there seems to be little possibility of avoiding growing budget deficits. The FY 1971 budget provides for an increase in expenditures of only 5% over that of FY 1970, and preliminary statements by the head of the National Budget Bureau suggest that the proposed FY 1972 budget will be only 5% over that of FY 1971. The small planned increase in budgeted expenditures for FY 1971 reflects cuts in economic development spending and delays in normal maintenance expenditures. It is unlikely, however, that the slowdown in budget expenditures can long continue, because of the large and growing requirement of both the military and civilian sectors.

30. The military threat along the Cambodian and Laos borders and growing insurgency in the north and northeast will probably raise requirements for defense and security expenditures. We assume an average annual increase of 10% in these expenditures through 1972 with a slight drop in spending in 1973. These are probably minimum estimates. Current civilian expenditures probably will grow at a rate not far below 10%. Despite a substantial pay hike, salaries in the public sector continue to lag behind those in the private sector, and inadequate past funding in areas such as education and social services will raise the expenditures needed in the future. Moreover, expenditures

for local government and state enterprises are likely to increase.*

31. In the past two years the government has reacted to a more rapid growth of current expenditures than of revenues by holding down capital expenditures. These expenditures are likely to grow 7%-8% annually in the next two or three years, even though the 1972-76 economic plan calls for a more substantial rise -- to $667 million from $471 million in 1967-71. Total government expenditures thus are likely to rise some 8% a year through 1972, while projected net revenues from foreign aid show a slight decline.

32. Domestic revenue will depend, of course, on the growth of the economy, imports and exports, as well as on changing tax rates. As will be shown below, economic growth will probably be too slow to generate the revenue needed to prevent budget deficits from rising if tax rates remain unchanged. And, if tax rates are increased, growth of the economy and imports will be further hampered, with some loss of revenues.

33. While the government may accept substantial budget deficits, it is probably not prepared to use fiscal tools as a means of "pump priming." Growth of exports of goods and services in the past have been the main stimulus to the growth of the economy. A slowdown in exports will slow economic growth unless it is compensated for by increased spending in other areas. The government could raise its spending, especially for investment, well beyond the above projections. But it will probably prefer to accept a lower rate of economic growth and, in any case, could not sustain rapid economic growth for long, because of the balance-of-payments problem, as shown below.

<u>Economic Growth and Foreign Exchange Reserves</u>

34. The prospect for the next few years is for a sharp slowdown in economic growth, as budget deficits are unlikely to increase enough to offset the slowdown in export earnings. Slower economic growth in turn will mean slower growth of imports.

* *Planned expenditures of local and state enterprises out of the central budget are to average $144 million annually during 1972-76, compared with $80 million in 1967-71.*

The reduction in import growth, however, will probably not be large or quick enough to prevent balance-of-payments deficits and a large fall in foreign exchange reserves.

35. This pattern of development reflects the momentum of the Thai economy. Private investment, bolstered by the buoyancy of private foreign investment, probably will continue to grow rapidly for awhile, even after economic growth declines. Unless Thai government policies toward foreign investment become markedly less favorable, confidence in the future of the economy may remain strong for some time. Consumption expenditures will follow the trend in personal income, but mostly with a lag. Consequently, growth of GDP is likely to slow substantially less than that of exports in the next two or three years, and the same will tend to be true of imports, which depend fairly directly on the growth of non-agricultural GDP.

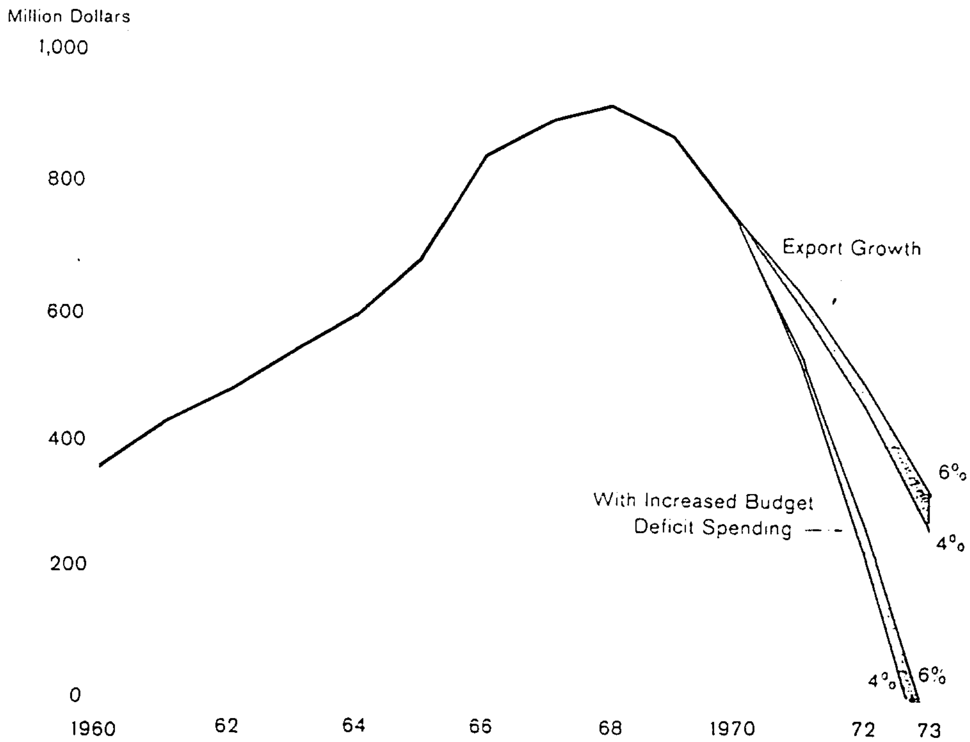
36. The foregoing projection of export earnings and of government expenditures, when introduced into an econometric model of the Thai economy (see the Appendix), yields a projected growth rate of between 4% and 5% a year for GDP. Growth of imports of goods and services declines to about 5% -- well above the 3%-4% growth of foreign exchange earnings. Thus even with a drop of about one-half in the rate of economic growth the balance-of-payments deficit may be expected to increase unless the government takes steps to restrict imports.

37. The result would be continuing heavy drawdowns of Thailand's foreign exchange reserves (see Figure 2). The following tabulation shows the reserve drawdown calculated by means of the econometric model on two alternative assumptions as to export growth rates. If the drawdown is of this magnitude, foreign exchange reserves will be only one-half to one-third the current level by the end of 1973.

	Million US $			
Merchandise Export Growth Rate	1971	1972	1973	Total
4%	133	158	191	482
6%	115	137	169	421

THAILAND: International Reserve Holdings

Figure 2



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38. These projections are based on economic relationships of the past decade and, as such, are tenuous. In the far different environment of the next two or three years, the pattern of development could change. Private investors could lose confidence and quickly cut their expenditures, thereby pushing GDP below the projected growth rate of about 5%. Such a response would cut import growth more than that of GDP because of the large import content of investment expenditures, and there would be smaller reserve drawdowns than projected above. Nevertheless, with the drawdown around the $100 million level in 1970, an average of $100-$150 million in the next two or three years seems to be a reasonable expectation.

39. These projections assume only moderate increases in Thai government spending and in the budget deficit. As mentioned earlier, the Thais would be reluctant to stimulate economic growth by means of larger budget deficits. But in any case there is little opportunity for such "pump priming" because

of the balance-of-payments situation. As shown in the following tabulation of foreign exchange draw-downs, increases in government spending sufficient to sustain growth of GDP at the 7%-8% historical rate would lead, barring import restrictions, to a wiping out of foreign exchange reserves in about two and one-half years.

Merchandise Export Growth Rate	Million US $			
	1971	1972	1973	Total
4%	226	304	410	940
6%	208	283	388	879

Financial Stability

40. One of the main constraints on government spending has been the fear of generating inflation. This will probably not be a problem in the next two or three years. The basic reason is that the decline in foreign exchange reserves is likely to more than compensate for the deficit in the government budget. In the past, with the balance of payments normally in surplus and, therefore, an expansionary source in the economy, large deficits on government accounts would have been inflationary. But with the balance of payments exerting a large and growing contractionary influence on the economy, increased budget deficits are needed as an offset. If, moreover, past trends in private financial behavior continue, the growth of private savings deposits will more than compensate for the increase in private bank credit.

41. The overall monetary trends will then be deflationary. There would be annual declines in the money supply during 1971-73 as shown in Table 7 with past private monetary behavior continuing, as defined in the econometric model, and with government expenditures at projected levels. Even with substantially higher deficit spending, the money supply would either decline or increase only slightly. It should be noted that there was little if any growth in the money supply in 1970 -- a year when the budget deficit was already large and the loss of reserves was much smaller than it will be in the next three years. Although it is conceivable that

growing government deficits and the loss of foreign exchange reserves will induce a change in private monetary behavior -- in particular a shift from savings deposits to currency holdings and a resulting increase in the rate of spending -- there seems to be no serious basis for concern about internal monetary stability in Thailand so long as recent government policies continue. Indeed the government may have to discourage the growth of private savings deposits in order to avoid a drop in the money supply. The crucial problem is clearly the balance-of-payments problem. Thailand is in danger, even with conservative fiscal policies, of seeing its reserves fall within the next two years to the extent that it will have to take drastic measures to bring foreign payments into balance.

Thailand's Economic Options

42. There thus seems to be little doubt that Thailand will face increasingly difficult economic problems in the next two or three years. A sharp drop in both economic growth and foreign exchange reserves seems inevitable. Moreover, even though reserves are still large, declines at the projected rates could not be allowed to continue for long. As indicated above, they would leave as little as \$300-\$450 million in reserves by the end of 1973 -- equivalent to some three months' imports. The Thais would undoubtedly take strenuous steps long before this to conserve their reserves. If, for example, the \$500 million level was considered a minimum, the government could be expected to take action in 1972, or even earlier. The Thai government has even mentioned the \$600 million level as being "critical". Especially if this refers to net reserves, it is still a very comfortable level by international standards. But the Thais give more importance than most to maintenance of their reserve position.

43. In the long term the balance-of-payments problem can better be solved by stimulating exports than by restricting imports. There is much the Thai government can do to promote both agricultural and industrial exports. For agricultural exports, it can build farm-to-market roads, provide price supports, subsidize fertilizer, build irrigation projects, improve extension programs, and encourage foreign business initiative. For industrial exports,

it can provide tax benefits, establish industrial estates outside the customs barriers, and encourage private foreign investors. But while the government is doing some of these things, it has not yet given export promotion a high priority. Industrial exports, for example, are planned to grow 10% annually and would then amount to less than 10% of projected total exports by 1976. Quite possibly the Thais believed that the availability of foreign exchange from US expenditures and aid in the past several years made a strong export program unnecessary. They may change their views, but even if this occurs soon, it will be too late to prevent a serious balance-of-payments problem in the next two or three years.

44. Thus, even though export promotion may grow in priority, and unless they are willing to let their reserves fall sharply, the Thais will probably have to restrict imports. This could be done by increasing import taxes, devaluing the currency, rationing imports or foreign exchange, restricting private spending by means of credit controls, or by several of these in combination.

45. The Thais would probably prefer increases in import taxes. They raised tariffs last July and may do so again this year. By concentrating tariff increases on consumer goods imports, they can expect some stimulation of domestic production. Thai consumer goods production is fairly well developed, but there is little short-term possibility of substituting domestic production for import of industrial materials and even less for machinery and equipment. Even in consumer goods, however, short-term import substitution possibilities are not large, because consumer goods imports make up only 23% of the total (compared with 26% in 1966). Devaluation would have the disadvantage, compared with higher tariffs, of not being selective among imports, so that it would tend to raise costs more and promote substitute production less. But it has the advantage of encouraging capital inflows while discouraging capital outflows.

46. The limitations on short-term import substitution possibilities apply also to the use of direct rationing of imports or foreign exchange. But this approach would have the disadvantage of fostering bureaucratic controls and corruption.

Although some production could be aided by import controls, the long-term impact on private investment and economic growth would probably be unfavorable. In any case, controls, once imposed, might be difficult to remove and would tend to draw the government's attention inward away from export promotion. They would also create imbalances and inflationary pressures that would themselves impede exports. Moreover, private firms and individuals might reduce their savings rate, and speculation as to government licensing policy could further stimulate inflation. Finally, import controls would encourage an outflow of capital that would be hard to stop.

47. Credit controls almost certainly would not be used as the sole means of restricting imports for fear of too severely depressing domestic economic activity. But whatever method is used, a cut in import growth sufficient to halt the decline in foreign exchange reserves probably could not be achieved without depressing the rate of economic growth below 5%. The effect of the drop in the growth rate would depend largely on agricultural production. Over the past decade the average annual growth of agricultural production has been about 5%. The exceptional growth rate of the past two years was the result of excellent weather.

Conclusions

48. A worsening balance-of-payments problem threatens to greatly reduce Thailand's rate of economic growth. Economic growth averaged 8% in the 1960s as a result of rapid increases in exports and an increasingly self-sustaining expansion of private investment. While merchandise exports leveled off beginning in the mid-1960s, there was a massive increase in US military expenditures in Thailand and in US economic aid. Generally conservative government policies gave ample rein to private business initiative, induced high rates of private savings, and kept prices virtually stable.

49. After years of running large surpluses, the balance-of-payments shifted to a deficit in 1969. The deficit grew in 1970 and is expected to increase further in the next few years. US

military expenditures and economic aid have been declining. Export earnings are growing only slowly as a result of poor market conditions for rice and rubber and lack of a vigorous export expansion policy in the past few years. Thailand's foreign exchange earnings are unlikely to grow more than 3%-4% annually through 1973. In this situation, Thailand's foreign exchange reserves, which peaked at about $1 billion in early 1969, will quickly fall to dangerously low levels unless there is a sharp decline in the growth of imports, which can occur only if economic growth is greatly slowed.

50. With these trends in exports, a continuation of current government fiscal and monetary policies will probably result in a declining economic growth rate to around 4%-5%. But even so sharp a drop -- almost 50% in the growth rate -- would not stem the loss of reserves, which could decline $100-$150 million annually in the next two or three years, or one-half to two-thirds from the present level. Bangkok would almost certainly take action to balance international payments before confidence in Thailand's currency became undermined.

51. Unless Thailand can obtain additional economic aid, it will have little choice but to restrict its imports. The government would probably prefer to raise import duties, as it did last year, and devaluation, direct import controls, and tighter domestic credit could also be used to curtail imports. In the longer term, there are excellent opportunities for diversifying the country's agricultural exports and developing new industrial exports. Export expansion has not had a high priority in government policy, however, and even if a strong program is developed soon, it could have little impact in the next two or three years.

52. Because of its predominant dependence on imports for most producer and investment goods, Thailand probably cannot avoid a further drop in its economic growth rate when import restrictions are applied. Cuts in imports of consumer goods could save some foreign exchange without depressing the growth rate, but these imports make up only about one-fifth of the total. Above-average agricultural performance could keep overall economic growth at a respectable level, but bad harvests, combined with the foreign exchange shortage, could bring economic stagnation.

53. A few years of slow growth would not necessarily have serious consequences. There is a danger, however, that Bangkok in its effort to hold down imports will abandon the generally liberal, outward-looking policies that have been successful in the past. The favorable opportunities for rapid expansion of exports in the long run, which is probably the soundest basis for sustained domestic growth, would then go begging. Bangkok's reaction to foreign exchange difficulties in the next year or two could, therefore, influence Thailand's economic development for a long time to come.

Table 1

Thailand: Exports

	1966	1967	1968	1969
Total exports (million Baht)	14,099	14,166	13,679	14,793
Of which:				
Rice	4,001	4,653	3,775	2,945
Rubber	1,861	1,574	1,816	2,664
Tin a/	1,316	1,822	1,510	1,631
Corn	1,520	1,355	1,556	1,674
Cassava	644	726	772	876
Jute and Kenaf	1,614	866	674	776
Principal export volume (thousand metric tons)				
Rice	1,508	1,482	1,068	1,023
Rubber	202	211	252	277
Tin a/	19	27	24	23
Corn	1,218	1,091	1,481	1,472
Cassava	689	781	889	972
Jute and Kenaf	473	317	289	254
Average prices of principal exports (Baht per metric ton) b/				
Rice	2,652	3,140	3,534	2,880
Rubber	9,188	7,455	7,200	9,618
Tin c/	73,327	67,145	62,872	70,947
Corn	1,247	1,242	1,051	1,137
Cassava	935	929	869	902
Kenaf	3,410	2,731	2,330	3,055

a. *Including minor shipments of tin concentrates in 1966 and 1967.*
b. *Derived from unrounded data.*
c. *Tin metal only.*

Table 2

Thailand: Gross Domestic Product a/

	Average Annual Growth, 1960-68 (Percent)	1969 Growth (Percent)	1969 Billion Baht b/
Agriculture	4.8	10.0	34.24
Crops	4.0	9.3	23.92
Livestock	3.0	2.7	3.83
Fisheries	18.2	29.1	3.59
Forestry	5.0	5.8	2.90
Mining and quarrying	14.3	34.3	2.39
Manufacturing	11.0	12.1	18.83
Construction	13.0	4.8	7.62
Electricity and water supply	22.0	20.2	1.43
Transportation and communications	6.3	6.7	7.32
Wholesale and retail trade	8.4	16.3	19.97
Banking, insurance, and real estate	16.0	15.4	4.12
Ownership of dwellings	3.3	4.8	2.19
Public administration and defense	6.7	9.2	4.76
Services	8.5	7.5	11.22
Gross domestic product	*7.8*	*11.1*	*114.07*

a. Revised national accounts data in constant 1962 prices. Because of rounding, components may not add to the totals shown.
b. Preliminary.

Table 3

Thailand: Balance of Payments a/

	1966	1967	1968	1969 b/
				Million US $
A. Goods, services, and private transfers				
Merchandise				
Exports (f.o.b.)	664.3	663.9	635.9	685.9
Imports (c.i.f.)	-873.7	-1,048.7	-1,136.8	-1,222.2
Trade balance	-209.4	- 384.8	- 500.9	- 536.3
Non-monetary gold	- 6.0	- 7.0	- 11.1	- 6.8
Services (net)				
Freight and insurance on merchandise	16.3	19.1	11.0	6.4
Other transportation	3.6	7.4	3.2	4.2
Travel	12.8	23.9	18.3	15.3
Investment income	- 0.4	8.0	13.1	10.8
Government n.i.e.	161.7	222.1	244.9	220.7
Other services	3.5	3.8	5.0	7.2
Private transfers	10.4	8.4	6.8	4.3
Total	- 7.5	- 99.1	- 209.7	- 274.2
B. Official transfer payments	36.9	49.3	67.6	52.8
C. Capital movements				
Private				
Direct investment	26.0	36.3	59.5	46.8
Loans to government enterprise	- 11.4	- 13.0	- 12.1	- 11.5
Other private				
Long-term loans	19.7	56.4	36.2	67.5
Short-term loans	17.2	3.3	4.7	8.9
Government				
Loans	17.4	23.2	28.9	15.8
Long-term assets	- 6.8	- 2.0	- 2.2	- 2.0
Liabilities to IBRD, IDA, and ABD	4.1	0.4	0.4	1.0
Other capital	- 0.6	- 0.1	- 0.1	0.1
Total	65.6	104.5	115.1	126.5
D. Recorded balance (A through C)	95.0	54.7	- 26.9	- 94.9
E. Net errors and omissions	63.0	6.5	48.4	46.9
F. Monetary movements c/				
Net IMF accounts	- 4.8	--	--	--
Private institutions' liabilities	38.3	19.5	22.4	33.0
Private institutions' assets	- 12.0	15.7	- 31.3	- 21.2
Central institutions	- 184.3	- 96.4	- 12.5	36.1
Monetary gold	4.8	--	--	--
Total	- 158.0	- 61.2	- 21.5	48.0

a. *Because of rounding, components may not add to the totals shown.*
b. *Preliminary.*
c. *A minus sign indicates an increase.*

Table 4

Thailand: Geographical Distribution of Rice Exports

Thousand Metric Tons

	1965	1966	1967	1968	1969
Total rice exports	1,895	1,508	1,482	1,068	1,023
Ceylon	186.3	112.4	97.6	56.9	30.6
Hong Kong	205.1	214.4	214.4	132.2	173.5
India	214.4	181.1	184.4	208.0	114.1
Indonesia	108.7	167.0	176.6	44.5	81.3
Japan	151.8	91.8	136.9	98.4	63.3
Malaysia	271.0	154.1	204.4	191.0	151.3
Philippines	129.9	49.0	99.9	Negl.	Negl.
Saudi Arabia	76.7	53.5	61.7	72.1	65.6
Singapore	172.3	143.3	118.8	130.9	133.8
Other	379.0	341.2	187.7	134.2	209.3

Table 5

Thailand: Imports a/

	1966	1967	1968	1969
				Million US $
Consumer goods	226.7	256.5	255.9	284.0
Durable	155.0	171.1	165.5	174.0
Nondurable	71.7	85.4	90.4	110.0
Intermediate and raw material	189.4	227.8	244.5	282.0
Consumer goods	122.6	141.9	154.2	180.8
Capital goods	66.8	85.9	90.3	101.2
Capital goods	274.1	362.6	400.9	441.0
Other imports	199.4	219.8	257.5	241.3
Vehicles and parts	88.4	113.5	133.2	121.3
Fuels and lubricants	90.0	76.3	95.9	87.9
Miscellaneous	21.0	30.0	28.4	32.1
Total	*889.6*	*1,066.7*	*1,158.8*	*1,248.4*

a. Because of rounding, components may not add to the totals shown.

Table 6

Thailand: Financial Assets

Million Baht

Year	Money Supply		Private Bank Saving		Total Liquid Assets
	Currency	Demand Deposits	Quasi-money	Savings Bonds	
1960	6,049	4,039	2,312	168	12,568
1961	6,512	4,563	2,945	214	14,234
1962	6,573	4,520	4,632	302	16,027
1963	6,704	5,177	5,881	431	18,193
1964	7,290	5,629	7,151	591	20,661
1965	8,181	6,151	8,569	713	23,614
1966	9,438	7,220	11,537	846	29,041
1967	9,911	7,963	14,290	978	33,142
1968	10,691	8,714	17,014	1,077	37,496
1969	11,010	9,293	20,281	1,174	41,758
1970 a/	10,741	9,031	22,147	1,203	43,122

a. *January-July.*

Table 7

Thailand: Projected Monetary Factors a/

Million US $

	4% Growth of Merchandise Exports					
	With Probable Trends in Government Spending			With Additional Government Spending b/		
	1971	1972	1973	1971	1972	1973
Expansionary factors						
Domestic government deficit	106	105	86	251	324	400
Private bank credit	163	173	182	170	184	199
Total	269	278	268	421	508	599
Contractionary factors						
Foreign exchange drawdown	133	158	191	226	304	410
Private bank savings	171	181	187	193	214	235
Total	304	339	378	419	518	645
Monetary gap	*- 35*	*- 61*	*-110*	*2*	*- 10*	*- 46*
	6% Growth of Merchandise Exports					
Expansionary factors						
Domestic government deficit	107	108	90	252	327	405
Private bank credit	165	176	187	171	186	204
Total	272	284	277	423	513	609
Contractionary factors						
Foreign exchange drawdown	115	137	169	208	283	388
Private bank savings	175	187	196	197	220	244
Total	290	324	365	405	503	632
Monetary gap	*- 18*	*- 40*	*- 88*	*18*	*10*	*- 23*

a. Budget deficits equal approximately $350 million, $440 million, and $510 million in 1971-73, respectively.
b. Sufficient to support a 7%-8% growth of GDP.

APPENDIX

Econometric Model of the Thai Economy

CIA's macroeconomic model of the Thai economy has been used in slightly revised form from that presented in ER IR 70-22 of September 1970. The revision consists of the addition of equations to reflect the behavior of the monetary sector and of a revised import equation. The model is a dynamic investment demand model which projects GDP and its various components, disposable income, government revenue, imports, and, in this presentation, private credit and savings in the monetized sector. Regressions for most variables are calculated from annual data in the period 1957 to 1967. Monetary behavior is based on data covering 1961-69.

Model Performance During 1969

Newly available data permitted the testing of the model for 1969 (see Table A-1). Actual performance was somewhat better than that predicted, partly because of the exceptional harvest. Thailand's national accounts were revised in early 1970. The accounts for 1968 and subsequent years are in the revised form. Because the model was constructed with the unrevised series, revised data for 1968 and 1969 were linked to the old data series. The differences between the two sets of data are small, with GDP varying no more than 3% in any one year.

Endogenous Variable Additions

Private Bank Credit

$$PBC = -877.098 + 0.03707PGDP$$

r^2 = 0.95
D-W = 2.00
Students' T = 11.11
Number of observations = 9

Private bank credit is as reported in the individual statements of the commercial banks and the Government Saving Bank. In the absence of any significant alternative capital markets in Thailand, institutionalized banking and the provision of credit should be an important indicator of the pace of private economic activity. It is derived as a function of private GDP from the model.

Private Bank Savings*

$$PBS = -99.774 + 0.13975PS$$

$r^2 = 0.90$
D-W = 2.20
Students' T = 7.9
Number of observations = 9

Private bank savings is composed of commercial bank time deposits and Government Saving Bank deposits and savings bond liabilities. Government savings accounts are included in the totals because they are largely those of state enterprises. Private bank savings are derived as a function of total private savings, which in turn are determined through the model as disposable income less private consumption.

Endogenous Variable Revisions

Imports

$$M = 514.2 + 0.289 \text{ Non-agricultural GDP}$$

$r^2 = 0.99$
D-W = 0.97
Students' T = 27.57
Number of observations = 11

** Thailand's monetary accounts were revised in November 1970 -- changes consisted of including commercial bank savings under the quasi-money account rather than as demand deposits. The unrevised series is used in this memorandum because it covers a longer time span and because the regression fit is better.*

Imports in the current year depend on non-agricultural GDP in the current year. Non-agricultural GDP has grown faster than the economy throughout the past decade, and this trend is expected to continue. National accounts data on GDP, by industrial origin, were used in the regression of non-agricultural activities in the economy and also show a close fit: NAGDP = 7272 + 0.752GDP (r^2 = 0.97).

Exogenous Variable Revisions

X2 Official Aid (AID)

Year	Million Baht
1970	1,810
1971	2,140
1972	2,340
1973	2,290

Official aid declined about 13% in 1969 to a level of 2,120 billion baht. The total encompasses both grants and loans (drawings). The slight rise projected through 1972 assumes an increase in the level of government loans, primarily to state enterprises, associated with funding of new projects with implementation of Thailand's new economic plan in 1971.

X3 Net Foreign Investment (NFI)

Year	Million Baht
1970	4,200
1971	4,700
1972	5,200
1973	5,700

Net foreign investment amounted to 3,726 million baht in 1969, only slightly higher than in the previous year. Using 1969 as a base, net foreign investment was arbitrarily increased 500 million baht yearly, similar to that of the previous model.

X4 US Military Expenditures (USM)

Year	Million Baht
1970	3,900
1971	3,400
1972	2,900
1973	2,400

These estimates are revised Bank of Thailand projections through 1975 and agree with current US mission estimates. The course of military developments related to the Indochina conflict, however, could alter the figures significantly.

Simulation

The following form of the model was utilized in computer simulation:

1. Y1 (GDP) = Y7 + Y5 + Y6 + Y4 + Y13 - Y12 (GDP)

2. Y2 (DEF) = Y6 + Y4 - Y8 (Government Deficit)

3. Y3 (YD) = Y1 - Y8 (Disposable Income)

4. Y4 (GIG) = -596.1 + 1.3191Y10 + 0.4111X2 + X7 (Gross Government Investment)

5. Y5 (GIP) = -7489.1 + 0.2452Y1 + 0.8478X3 (Gross Private Investment)

6. Y6 (CGOV) = -75.7 + 0.0707Y1 + X5 + X6 + X8 (Government Consumption)

7. Y7 (CPVT) = 7120.4 + 0.1798Y3 + 0.5669Z3 (Private Consumption)

8. Y8 (RG) = -1578.7 + 0.1822Y11 + 0.0946Y9 + 0.0195Y1 (Total Government Revenue)

9. Y9 (CPVT+GIP+X) = Y7 + Y5 + Y13 (Domestic Revenue Base)

10. Y10 (RG-CGOV+GC^{O} +MILEX) = Y8 - Y6 + X6 + X8 (Funds Available)

11. Y11 (M) = 514.2 + 0.289Y23 (Imports)

12. Y12 (TM) = Y11 + X8 (Total Imports, Including Military Goods)

13. Y13 (X) = X1 + X4 (Total Exports)

14. Y14 (PGDP) = Y1 - Y4 - Y6 (Private GDP)

15. Y15 (PBC) = -877.1 + 0.0371Y14 (Private Bank Credit)

16. Y16 (PS) = Y3 - Y7 (Private Savings)

17. Y17 (LS) = -99.8 + 0.1398Y16 (Private Bank Savings)

18. Y18 (BPM) = -1095.6 + 1.1422Y11 (Balance of Payments Imports)

19. Y19 (BPX) = -767.6 + 1.109Y13 (Balance of Payments Exports)

20. Y20 (DGD) = Y6 + Y4 - Y8 - X2 (Domestic Government Deficit)

21. Y21 (FXD) = Y18 - Y19 - X3 -X9 (Foreign Exchange Drawings)

22. Y22 (MGAP) = Y20 + Y15 - Y21 - Y17 (Money Supply)

23. Y23 (NAGDP) = -7272 + 0.752Y1 (Non-agricultural GDP)

The exogenous variables are as follows:

X1 = XGOS (Exports of goods and services excluding US military spending)

X2 = AID (Official aid)

X3 = NFI (t-1) (Net foreign investment)

X4 = USM (US Vietnam-related military spending)

X5 = MILI (Local Thai government spending on military expenditures)

X6 = GC (Increased government spending on consumption)

X7 = GI (Increased government spending on investment)

X8 = MILEX (Thai government expenditures of foreign exchange for military goods)

X9 = OTP (Official transfer payments)

Imports and exports are converted from a national accounts to a balance-of-payments basis, and together with official transfer payments and net foreign investment yield the degree of foreign exchange reserve drawdown. The money gap shows the expected impact of foreign exchange drawdowns, domestic budget deficits, demand for private bank credit, and the supply of private bank savings on money supply. The Z valuables are the Y variables lagged one year.

Table A-1

Model Test a/

	1968				1969			
	Million Baht				Million Baht			
	Actual	Calculated	Difference	Percent	Actual b/	Calculated	Difference	Percent
Gross domestic product	116,662	116,408	- 254	0.2	129,378	128,413	- 965	0.7
Disposable income	99,779	99,858	79	0.1	111,056	110,111	- 945	0.9
Gross government investment	7,593	8,253	660	8.7	7,859	8,668	809	10.3
Gross private investment	22,487	23,770	1,283	5.7	25,793	27,158	1,365	5.3
Government consumption	11,396	10,608	- 788	6.9	13,003	13,952	949	7.3
Total government revenue	16,883	16,550	- 333	2.0	18,322	18,301	- 21	0.1
Private consumption	75,985	76,551	566	0.7	83,203	83,483	280	0.3
Imports	23,924	23,954	30	0.1	25,444	26,320	876	3.4
Private bank credit	19,810	19,825	15	0.1	22,897	22,867	- 30	0.1
Private bank savings	18,091	18,501	410	2.3	21,455	21,740	285	1.3
Money supply	19,405	17,934	-1,471	7.6	20,303	20,376	73	0.4

a. Although the model can be judged as to how it reproduces the past, it cannot be tested until data are available from the future performance of the economy. Actual performance over the fitted period, however, is a necessary condition for acceptance of a specific model. The principal model results for 1971-73 are shown in Table A-2.

b. Preliminary estimate.

Table A-2

Principal Model Results

Million US $ in Current Prices

	4% Growth in Merchandise Exports					
	With Probable Trends in Government Spending			With Additional Government Spending		
	1971	1972	1973	1971	1972	1973
Gross domestic product	6,722	7,031	7,312	7,097	7,620	8,194
Disposable income	5,751	6,012	6,248	6,079	6,525	7,017
Gross government investment	454	493	520	481	537	587
Gross private investment	1,480	1,576	1,665	1,572	1,720	1,881
Government consumption	727	743	737	891	994	1,098
Private consumption	4,492	4,684	4,874	4,664	4,962	5,303
Imports of goods and services a/	1,474	1,537	1,569	1,555	1,665	1,760
Exports of goods and services a/	1,044	1,071	1,085	1,044	1,071	1,085
	6% Growth of Merchandise Exports					
Gross domestic product	6,761	7,122	7,467	7,136	7,711	8,349
Disposable income	5,784	6,088	6,379	6,112	6,602	7,147
Gross government investment	458	504	537	485	548	604
Gross private investment	1,489	1,598	1,703	1,581	1,743	1,919
Government consumption	729	750	748	894	1,000	1,109
Private consumption	4,498	4,716	4,941	4,670	4,994	5,370
Imports of goods and services a/	1,482	1,557	1,602	1,564	1,684	1,794
Exports of goods and services a/	1,069	1,111	1,140	1,069	1,111	1,140

a. *National accounts basis, which differs from balance-of-payments data.*

Thai Statistics Used in Regressions

Additional data series for regressions used in this memorandum are presented below.*

	Million Baht				
Year	Non-agricultural GDP	Annual Increases In Private Credit	Private GDP	Private Savings	Annual Increases In Private Bank Savings
1957	25,602	-	-	-	-
1958	26,746	-	-	-	-
1959	30,699	-	-	-	-
1960	34,537	-	-	-	-
1961	36,803	825	50,837	7,839	678
1962	41,000	1,205	55,027	8,843	1,775
1963	43,843	1,117	59,377	10,211	1,378
1964	49,200	1,646	63,831	12,680	1,430
1965	55,194	2,058	69,187	14,195	1,539
1966	62,869	2,090	82,179	22,146	3,101
1967	73,292	2,342	88,595	20,739	2,886
1968	-	2,767	97,673	20,297	2,822
1969	-	3,087	108,516	25,238	3,364

* *For data not presented in this memorandum, see ER IR 70-22,* Thailand: Recent Economic Performance and Prospects, *September 1970, Appendix B, SECRET.*